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U.S., Soviets Curb Spread of A-Arms

WASHINGTON—In 1983, based bn intelligence information, the United States handed the Soviet Union a diplomatic note objecting to nuclear assistance the Soviets were about to provide to North Korea. The Soviets, replying that they had not recognized that a potential for weapons development was involved, withheld or modified the aid sufficiently to satisfy Washington.

Such cooperation has worked both ways. In 1977, when the Soviets shared with the United States intelligence that strongly indicated that South Africa was preparing to set off a nuclear device in the Kalahari Desert. pressure from the United States and other Western nations forced cancellation of the test.

The two incidents dramatize striking behind-the-scenes collaboration by the superpowers to prevent the spread of nuclear weapons—an "astonishingly successful" effort, according to Under Secretary of Defense Fred C. Ikle. one of the Administration's more hard-line officials.

Club Could Grow

But this summer, as the world prepares to mark the 40th anniversary of the dropping of the first atomic bomb on Hiroshima, several incidents-including diversion to Israel and Pakistan of "triggers" that could be used for nuclear bombs and secret plutonium experiments by Sweden—have reminded, the world that the club of nuclear nations could grow again.

And beyond concerns that new nations may seek nuclear weapons, there is a continuing threat that terrorists will "go nuclear"-a possibility that will continue to grow as nuclear technology becomes ever more accessible and weapons are further miniaturized. Already, the U.S. arsenal includes a 58-pound back-pack "nuke."

Only six nations—the two superpowers, along with Britain, France, China and India—are known to have exploded nuclear devices so

By ROBERT C. TOTH, Times Staff Writer far, and it has been 11 years since India became the newest member of the nuclear club. That record stands in sharp contrast to the dark predictions early in the Administration of President John F. Kennedy that 25 nations would have the bomb in 25 years.

Superpower Cooperation

A lot of the credit is attributed to superpower cooperation. In addition to information exchanges at twice-yearly meetings, the United States and the Soviet Union closely monitor the Nuclear Non-Proliferation Treaty, signed by them in 1968 and now ratified by a total of 129 nations. And the International Atomic Energy Agency (IAEA) enforces non-proliferation treaty safeguards to prevent diversion of uranium and plutonium from peaceful purposes to weapons.

The non-proliferation treaty "is the most widely adhered-to arms control treaty in history," according to Richard T. Kennedy, the Administration's ambassador-at-large on this issue. No nation that has adhered to it has withdrawn from it or, so far as is known, violated it, he added.

In fact, it is just about the only arms control agreement the United States has not accused the Soviets of violating. Even the breakdown of the arms control talks in Geneva at the end of 1983 did not interfere with a meeting between the two nations early the next year in their determination to prevent spread of the weapons.

Despite this remarkable record. "extraordinary vigilance, extraordinary effort, and extraordinary cooperation" will be required to maintain it, Kennedy said in an interview.

There are some of the clouds on the horizon:

-Several incidents of clandestine nuclear activity have abruptly surfaced, suggesting that the level of illegal dealing is higher than had been previously believed, according to Leonard S. Spector of the Carnegie Endowment for International Peace. Israel and Pakistan obtained krytron triggering devic-

es illegally from the United States, for example, and Sweden conducted secret experiments in compressing plutonium toward a critical mass, one step short of full-scale atomic tests.

And South Africa has quietly hired American reactor operators in apparent violation of a U.S. law that, because of South Africa's nuclear activities, also bars U.S. uranium fuel for its electric power reactors.

-Non-nuclear nations are certain to complain that Washington and Moscow have collaborated to prevent the spread of weapons to the Third World at the same time that they have failed, despite their commitment under the treaty to conduct "good faith" negotiations to end the arms race, to reduce their own enormous nuclear arsenals. The complaints are expected to surface at the third review conference of the non-proliferation treaty in Geneva in late summer.

The non-nuclear countries protest that the nuclear nations have used funds to prevent proliferation which should have gone to spreading peaceful uses of nuclear technology in less developed nations.

-The International Atomic Energy Agency is in trouble, according to two new studies. David Fischer of the Stockholm International Peace Research Institute found that Third World nations have increasingly politicized the agency, as, for example, in their brief lifting of Israel's credentials in 1981 after it bombed an Iraqi reactor complex that it suspected of working toward nuclear weapons. These nations have pushed through a demand that Israel pledge before the agency's September meeting not to take such action again or else face IAEA sanctions.

"The gravest and most immediately divisive force" is the controversy over Israel, said Lawrence Scheinman of Cornell University. The U.S. Congress has cut \$5.7 million, or 25%, from the Reagan Administration's request for funds for the IAEA for next year because of the U.N.-sponsored agency's

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treatment of Israel. That cut, Scheinman wrote in a recent report for Resources for the Future, has damaged the agency's "fabric and spirit."

The non-proliferation treaty review conference, which begins in August, could be disrupted if the Arab states and the Soviets try to bar Israel, which has not signed the treaty but may attend as an observer. In that event, the United States might walk out, as it did from the session in 1981 in which Israel was censured.

Deployment Reported

Recent reports could refuel antipathy toward Israel. These include an estimate by Spector and others that Israel can quickly assemble up to 20 atomic weapons, and an Aerospace Daily story that some of Israel's nuclear-capable Jericho II missiles, with a range of 500 miles, have been deployed in the Negev Desert and Golan Heights.

Similarly, suspicions that South Africa and Israel detonated a nuclear device above the South Atlantic in 1979 have been revived by a report last week that, shortly after the alleged test, the thyroid glands of Australian sheep were found to have contained several times more than the normal levels of iodine-131, a product of nuclear fallout

At the time, according to intelligence assessments, South Africa could have exploded a crude atomic device only on land but not in the atmosphere—unless it had help. Such analysis added fuel to long suspicions of collaboration between South Africa and Israel.

Israel and South Africa are two members of the so-called "Gang of Five" nations which have not forsworn nuclear weapons by signing the non-proliferation treaty. A third, Pakistan, is believed on the verge of acquiring a nuclear weapon capability. The other two are Brazil and Argentina, which remain outside the treaty despite their new civilian leadership.

At the same time, nations appear to be finding more reasons for not developing nuclear weapons even when they have the capability, according to governmental and private U.S. experts.

A Safer Route

Twenty years ago, the nations considered most likely to develop the technical capability to build

weapons included Italy, Japan and South Korea. They have apparently decided that it is safer to ally themselves with the United States than to manufacture atomic bombs of their own.

Such neutral states as Sweden and Switzerland, although capable of making nuclear weapons, have opted for non-nuclear defenses chiefly to avoid the hostility of neighbors and the likelihood of becoming targets of Soviet nuclear weapons.

The smaller states also recognize that developing weapons makes no difference in their relations to the superpowers. Pride is no longer enough reason for going nuclear, according to Jozef Goldblat of the Stockholm International Peace Research Institute.

India, which in 1974 became the last nation to join the nuclear club, had many motives, with the desire to protect itself from Chinese blackmail probably primary, according to various experts. But now India finds itself a decade or so behind in nuclear technology because of sanctions imposed by the West following its 1974 nuclear explosion, according to reports from India. And if Pakistan now builds a nuclear weapon, India will find its security no greater than before it had the bomb.

Another drawback to going nuclear is that the transition to nuclear weapons can be particularly dangerous. As Iraq found, an enemy may launch a preemptive strike, as Israel did, to prevent nuclear weapons from being acquired. Pakistan now faces the danger that India might attack rather than allow its historic enemy to build an atomic bomb.

But perhaps the most important reason for the success of non-proliferation efforts, according to various experts, is the international climate fostered by the non-proliferation treaty and the high degree of cooperation by the superpowers.

The treaty and the IAEA safe-guards have been reinforced by the collaboration since 1974 of 17 developed (so-called "supplier") nations to restrict the export of technology that might aid weapon development. And, in 1978, the United States enacted a law requiring nations importing U.S. reactors and fuel to submit all their nuclear facilities to IAEA safeguards.

Beyond that are the pressures exerted by the United States and Soviet Union directly and privately on their allies to forgo nuclear weapons.

South Korea, for example, made a determined push for such weapons in 1977 after the Carter Administration announced it would pull a U.S. army division out of that country. Seoul stopped the effort after the U.S. canceled its withdrawal order and promised improved weapons, such as the F-16 fighter, to its forces. Similar U.S. efforts aborted a Taiwanese nuclear weapon program, according to authorities.

William C. Potter, of UCLA's Center for International and Strategic Affairs, dates U.S. anxiety about proliferation to the Indian explosion in 1974. But Soviet concern goes back much further to 1958, when China announced it would use Soviet aid to develop nuclear weapons. After the bitter Sino-Soviet split, Moscow retrenched noticeably in its nuclear exports.

For example, the Soviet Union broke promises to Hungary and Czechoslovakia to build huge power plants, Porter wrote recently in the Washington Quarterly, and Moscow has been foot-dragging in its agreement with Cuba to build a power plant near Cienfuegos.

But Potter also found, in studying Soviet non-proliferation practices, that the Soviet record is "imperfect." Moscow never condemned the Indian nuclear explosion and, despite its caution, it supplies nuclear materials to Libya, Cuba and Argentina. Libya has ratified the non-proliferation treaty but openly endorses terrorist acts in the world, and neither Cuba nor Argentina has signed the treaty.